

Fig. 1.

For more information about early animation techniques, check out:

**Toy** by Lincoln 1867 U.S. Patent #64,117

**Kinetoscope** by Giel 1900 U.S. Patent #661,515

**Phenakistoscope** by Brown 1869 U.S. Patent #93,594

**Scenoscope** by Foster and Daniels 1897 U.S. Patent #575,153

**Toy Thaumatrope** by Earle 1876 U.S. Patent #183,550

**Apparatus for Producing Moving Pictures** by Hurd 1914 U.S.

Patent #1,143,542

**Moving Picture Toy** by Schultz U.S. Patent #1,595,881

**Paper Optical Illusion Toy** by Cloud 1950 U.S. Patent #2,516,367

# UNITED STATES PATENT OFFICE.

HENRY VAN HOEVENBERGH, OF ELIZABETH, NEW JERSEY.

## OPTICAL TOY.

SPECIFICATION forming part of Letters Patent No. 259,950, dated June 20, 1882.

Application filed May 24, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY VAN HOEVENBERGH, a citizen of the United States, and a resident of Elizabeth, in the county of Union and State of New Jersey, have invented a new and useful Improvement in Optical Toys, of which the following is a specification.

My invention relates to that class of optical toys which depend for their action upon the well-known fact that the impression communicated by an object to the eye remains upon the retina for a short time after the object itself has been withdrawn.

In a patent granted to me May 16, 1882, No. 258,164, I have described and illustrated a method of and devices for producing an optical illusion, whereby a series of pictorial representations of an object in different positions may be passed in rapid succession before the eye, thereby conveying the impression to the mind of a single object in motion.

The method therein described consists in uniting together at one margin a series of leaves, each bearing upon its upper surface a pictorial representation of some object, the representation upon each succeeding leaf showing the same object in a slightly different position. The leaves are arranged in such a manner as to be exposed momentarily and in rapid succession to the eye by being bent backward and then allowed to resume their normal position one by one, but with any required degree of rapidity.

My present invention relates to certain improvements upon the invention described in the patent above referred to; and it consists in combining two or more series of superposed leaves, each containing a distinct succession of pictorial representations, so that the individual leaves of each series alternate with each other in regular succession, and in cutting away a corresponding portion from the lower margin of each leaf in each series in such a manner that the representations in either series alone may be brought into view in succession, accordingly as the projections remaining upon the free ends of the cards in that series of the pack are released from the hand of the operator.

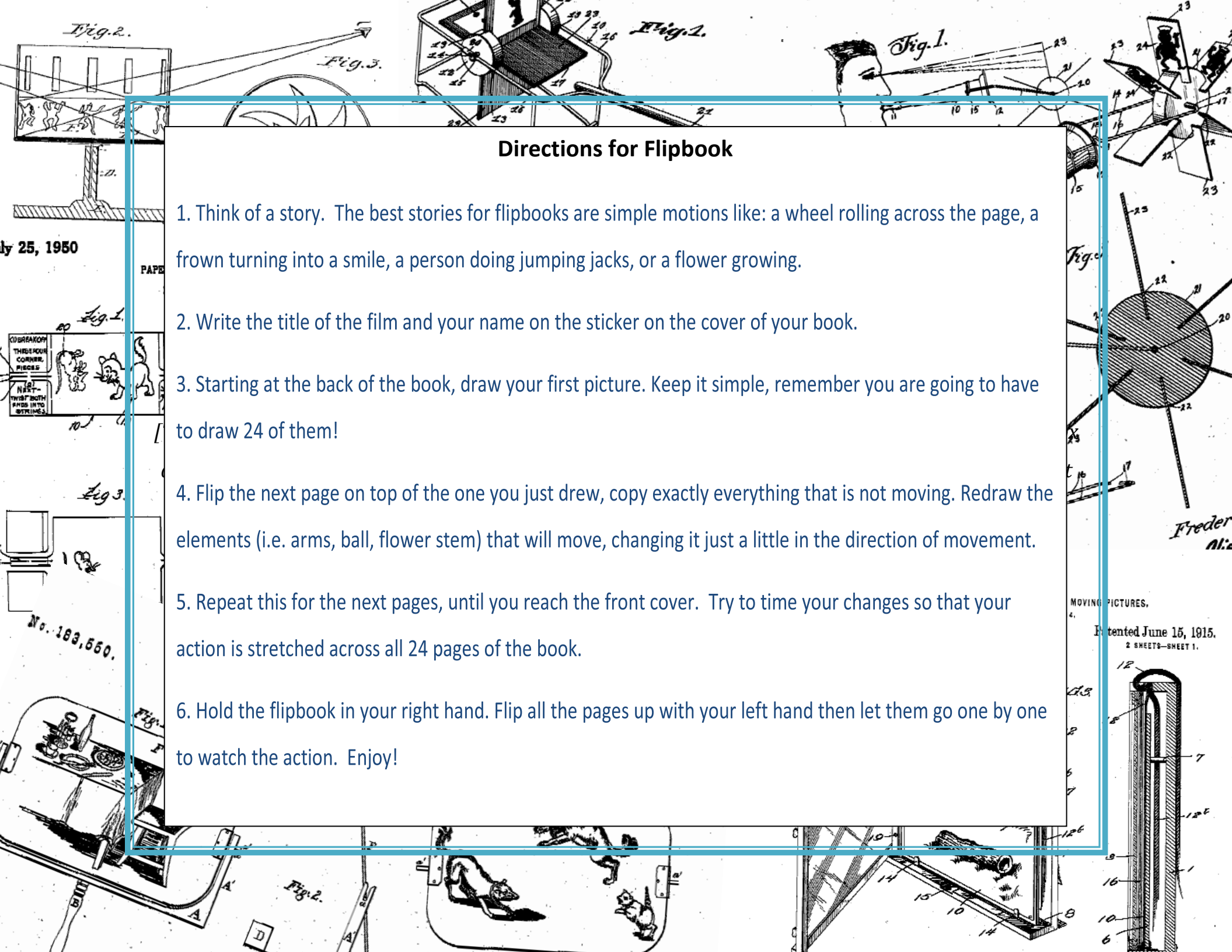
In the accompanying drawings, Figure 1 is a perspective view of my invention. Fig. 2 is

a plan view, showing the method of preparing the free ends so that one series or the other may be brought into view at will.

In carrying out my invention two or more sets of cards of moderate stiffness are employed, and each set or pack is preferably trimmed off at one edge in a beveled form, as shown at C, but is provided with a projection, c, which partakes of the same angle or bevel. The projections upon all the cards in each pack correspond with each other with respect to their position at the free end of the pack, but occupy different vertical positions in the pack upon the different series. For example, if two series of cards are to be combined, the projections upon one series occupy the right-hand half, the ends being cut away through the other half, while at the ends of the other series the projections are permitted to remain at the left side, the right-hand portion being cut away. If three or more series are to be employed, the extensions of two series occupy the two outer thirds of the beveled ends, respectively, while the other is provided with a projection at central portion of its beveled end. The same plan is carried out for any required number of series which are to be combined.

Each card of each series bears a pictorial representation of some object, but this object is represented in a different position upon the successive cards of its own series, and each series contains a different subject or set of representations, as hereinafter more fully explained. The packs thus prepared are made up with their successive leaves alternating in the manner described. The three straight edges of all the cards in the pack are flush with each other, and the projections of the different series are preserved in their relative positions, and finally all the series are bound together bookwise into one pack by uniting them at the margin opposite the beveled portion by a clamp or other device, B, of suitable character.

The representations upon each card of a series are unlike in that each succeeding picture represents the object in a slightly different progressive position, as illustrated in Fig. 1. It is evident, therefore, that if the leaves be brought rapidly and in proper succession into view the appearance will be as of a moving object or group of objects. The manner in which this



## Directions for Flipbook

1. Think of a story. The best stories for flipbooks are simple motions like: a wheel rolling across the page, a frown turning into a smile, a person doing jumping jacks, or a flower growing.
2. Write the title of the film and your name on the sticker on the cover of your book.
3. Starting at the back of the book, draw your first picture. Keep it simple, remember you are going to have to draw 24 of them!
4. Flip the next page on top of the one you just drew, copy exactly everything that is not moving. Redraw the elements (i.e. arms, ball, flower stem) that will move, changing it just a little in the direction of movement.
5. Repeat this for the next pages, until you reach the front cover. Try to time your changes so that your action is stretched across all 24 pages of the book.
6. Hold the flipbook in your right hand. Flip all the pages up with your left hand then let them go one by one to watch the action. Enjoy!

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